5. (Amended) The method of Claim 1, wherein said recipient and donor cells are mammalian cells.

a2 6. (Amended) The method of Claim 5, wherein said recipient cell is derived from a mammal selected from the group consisting of non-human primate, human, rat, guinea pig, mouse, rabbit, dog, cat, hamster, goat, cattle, sheep, horse, bison and buffalo.

7. (Amended) The method of Claim 5, wherein said recipient cell is a human somatic cell.

8. (Amended) The method of Claim 5, wherein said recipient cell is selected from the group consisting of cardiac, lung, skin, liver, spleen, kidney, thymus, stomach, intestine, neural, muscle, bone, cartilage, immune, pancreatic, spleen, esophageal, and corneal cells.

9. (Amended) The method of Claim 1, wherein said recipient cell is genetically modified prior, concurrent or subsequent to the introduction of said cytoplasm.

10. (Amended) The method of Claim 9, wherein said genetically modified cell comprises several genetic modifications.

Q2 cont

11. (Amended) The method of Claim 9, wherein said genetically modified recipient cell comprises a recombinant DNA that encodes for a desired polypeptide.

Q3

26. (Amended) A method for producing a culture comprising embryonic stem cells comprising introducing cytoplasm from a donor oocyte or embryonic cell into a differentiated mammalian cell in tissue culture to effect de-differentiation of the recipient cell into an embryonic stem cell;

wherein said introduction of cytoplasm does not result in production of an embryo.

Q4

32. (Amended) A culture comprising embryonic stem cells produced by the method of Claim 26.

New claims are 36-53 are added:

Q5

36. The method of claim 26, wherein the donor oocyte or embryonic cell is of the same species as the mammalian cell.

37. The method of claim 26, wherein the donor oocyte or embryonic cell and the mammalian cell are of different species.

38. A method for producing a differentiated cell comprising introducing into a differentiated somatic recipient cell, cytoplasm from another less differentiated or undifferentiated donor cell, to effect de-differentiation of the recipient cell;

wherein said introduction of cytoplasm does not result in production of an embryo; and

culturing the de-differentiated cell under conditions in which said cell differentiates.

39. The method of Claim 38, wherein said donor cell is an oocyte or an embryonic cell.

40. The method of Claim 38, which further comprises the introduction of telomerase or a DNA construct that provides for the expression of telomerase into said recipient cell and alters the life-span of said cell.

41. The method of Claim 40, wherein said recipient cell comprises a telomerase DNA under the control of a regulatable promoter.

42. The method of Claim 38, wherein said recipient and donor cells are mammalian cells.

43. The method of Claim 42, wherein said recipient cell is derived from a mammal selected from the group consisting of non-human primate, human, rat, guinea pig, mouse, rabbit, dog, cat, hamster, goat, cattle, sheep, horse, bison and buffalo.

44. The method of Claim 42, wherein said recipient cell is a human somatic cell.

45. The method of Claim 42, wherein said recipient cell is selected from the group consisting of cardiac, lung, skin, liver, spleen, kidney, thymus, stomach, intestine, neural, muscle, bone, cartilage, immune, pancreatic, spleen, esophageal, and corneal cells.

46. The method of Claim 38, wherein said recipient cell is genetically modified prior, concurrent or subsequent to the introduction of said cytoplasm.

47. The method of Claim 46, wherein said genetically modified cell comprises several genetic modifications.

48. The method of Claim 46, wherein said genetically modified recipient cell comprises a recombinant DNA that encodes for a desired polypeptide.

49. The method of Claim 48, wherein said recombinant DNA encodes for a polypeptide selected from the group consisting of a hormone, growth factor, structural polypeptide, enzyme, enzyme agonist or antagonist, antibody, antibacterial, anti-viral, anti-fungal, cytokine, clotting factor, and anti-tumor polypeptide.

50. The method of Claim 40, which results in the increased life-span of a mammalian cell.

51. The method of claim 38, wherein the recipient and donor cells are of different species.